musikelectronic geithain

ME 180

Instructions for installation and use

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1 Introduction

Dear customer,

Thank you for the trust you have put in us by buying these speakers. You decided upon a quality product that in regard to tonal and technical characteristics complies to the utmost expectations.

The usual burn-in period is not required, because the speakers are artificially aged in-house.

Please read the technical description and manual to take advantage of the capabilities of these speakers and ensure safe operation.

2 System description

The ME 180 extends Musikelectronic Geithain's product range of passive high-end loudspeakers. The three-way concept comprises two highly efficient 10-inch woofer systems and a tweeter array of three vertically arranged 1-inch dome tweeters. Through this combination a sensitivity of 90 dB is achieved without wave guides. In connection with the linearised impedance the ME 180 is also the perfect partner to tube amplifiers. Power compression and non-linear distortions are therefore very low, even in fortissimo passages. The directivity index of the system has been optimised to listening distances between 3 and 6 metres, providing a natural sound image in stereo and multi-channel operation. The bass reflex system, designed to deliver optimal transient fidelity, ensures a precise and dry bass reproduction down to a roll-off frequency of 35 Hz. It is possible to close the cabinet's vent and thereby prevent excessive increase in the bass range when positioned near walls.

Frequently used wave guides in front of tweeter systems make directivity control easy; however they tend to produce unavoidable colourations caused by short-time reflections at the inner horn surface. Musikelectronic Geithain breaks the mould by using a tweeter array, doing without horn attachments for sound level boost. The tweeter unit that is arranged coaxially in front of the midrange system guarantees the trademark low-colouration rendition of music and speech and creates the sound event closeness desired by the listener.

The ME 180 is adjustable to the acoustic conditions in the listening room. Especially in modern living rooms with longer reverberation time in the mid range the increase of the acoustic power in the presence range is possible as well as an attenuation at 200 Hz.

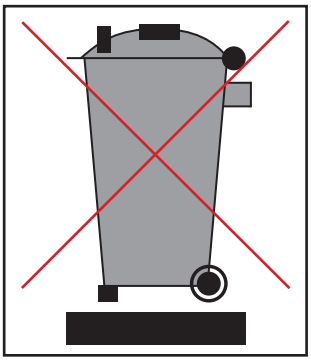
Summing up all the constructive measures, the ME 180 achieves seamless sound compatibility with all other products made in the Geithain manufacture. The highly neutral tone quality, excellent spatial performance and depth arrangement, together with fatigue-free monitoring of even most complex sound events are typical ME Geithain characteristics of this loudspeaker.

This loudspeaker will harmonise perfectly with your listening room due to its attractive design and the large variety of different wood veneers or high-gloss or semi-gloss varnish surfaces.

3 Basic information

3.1 Guidelines

This product complies to requirements of current European and national guidelines (Elektromagnetische Verträglichkeit 89/336/EWG).



Products built by us belong to B2C-class of the WEEE guidelines and must not be disposed with domestic waste.

3.2 Safety instructions

Like using any other electrical device you should observe the following operation guidelines, safety instructions and warning signs to ensure optimum functionality and safety of operation!

- Read these instructions carefully.
- Keep these instructions.
- Do not attempt to service this product yourself as opening or removing cover may expose you to dangerous voltage or other hazards.
- Do not install the device near any heat sources.
- Do not expose the device to direct sun radiation.
- Do not install the device in rooms with high humidity.
- Do not try to insert anything into device openings.
- The device shall not be exposed to dripping or splashing and no objects filled with liquids shall be placed on the device.
- There is risk of electric shock when the device is open.
- Refer all servicing to qualified service personnel.
- Clean only with dry or slightly moistened cloth.

3.3 Unboxing

The speakers are shipped in proper condition. Unpack the speaker carefully and check for visible damages. In case of damages report them to your retailer. Keep the packaging, in case the speaker has to be transported in the future.

To unpack the device please refer to the additional user manual for unboxing.

3.4 Delivery contents

- Speaker
- Bi-wire cable jumpers
- Solid gold-plated jumpers
- Technical description and user manual
- User manual for unboxing

3.5 Cleaning

The speaker is made of real wood veneer and be nurtured in the same way as furnishings. We advice quality wax polish to ensure durability of the veneer. Surfaces can also be cleaned with tidy, slightly damped, fuzz-free, smooth cloth.

3.6 Environmental conditions

Ensure the following environmental conditions in your listening room:

- Operating temperature + 15°C ... + 35°C
- Storage temperature range - 25°C ... + 45°C
- Relative humidity 45 % ... 75 %

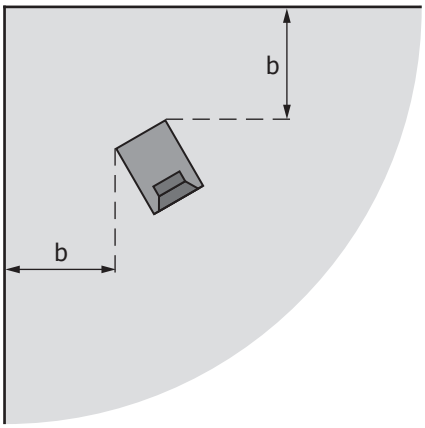
3.7 Guarantee acknowledgements

Opening the device by unauthorized personnel leads to all claims under guarantee expire. In case of destruction by overload, misuse or outside influences there are no claims under guarantee.

4 Positioning

Our speakers do not impose special requirements neither in stereo nor in multichannel set-ups. Nonetheless speaker positioning has influence on listening impression because every room is individually designed and furnished. The following advices are just guidelines that ease proper positioning. In addition we offer a measurement service to take advantage of the capabilities of your listening environment.

4.1 Positioning near walls



When speakers are installed near walls sound quality is physically affected. Every customary speaker behaves as a punctual sonic source in the low frequency range, with sonic waves spherical radiated without any constructional measures. Back wall reflections are unavoidable.

For optimum listening experience a minimum distance of 50 cm (20 ft) to walls and furniture should be ensured. Avoid corner installations because unwanted bass accentuation could arise.

$$b \geq 0{,}5 \text{ m (20 ft)}$$

4.2 Acoustical adjustments

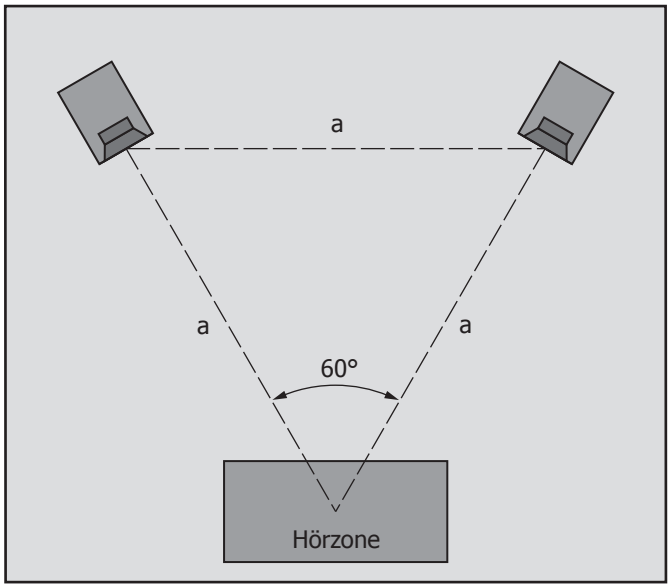
The ME 180 is adjustable to the acoustic conditions of the listening room. All measures are executable independently.

By closing the bass vent it is possible to reduce the bass increase due to speaker positioning close to walls. Lay the speaker on it's side to access the cover on the bottom. Use a, fuzz-free pad to avoid damages when laying down the speaker.

With the lower jumper on the terminal plate the frequency range around 200 Hz can be attenuated by removing the jumper.

Increasing the presence range around 3 kHz by 3 dB is also possible. To achieve this, plug another jumper into the designated position at the top of the terminal plate.

4.3 Stereo operation

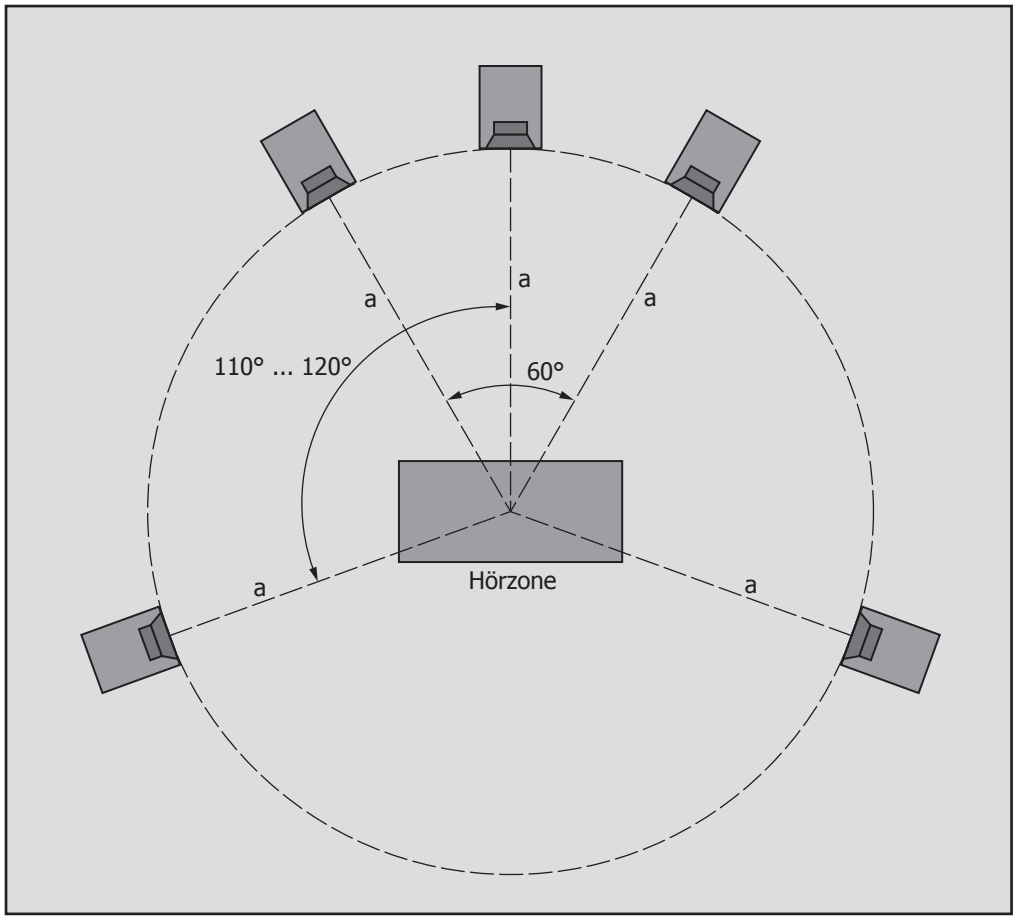


The optimum position of the speakers in your listening environment is the so-called stereo triangle (see figure). The base distance between the speakers and the distance to the hearing zone form an equilateral triangle (stereo triangle). A distance less or more than distance a should be avoided. For precise, spacial reproduction turn the speakers inside, directed to the hearing zone.

a = 3 ... 6 m (10 ... 20 ft)

4.4 Surround operation

In surround operation the stereo triangle (see Stereo operation) is extended to a circle. The hearing zone is the centre of this circle. Position all speakers in the same distance to the hearing zone. The centre speaker is positioned in the middle between both front speakers. Pay attention to positioning the front and rear speakers horizontally along one plane. The angle between centre and rear speakers should be about 110° - 120°.



a = 3 ... 6 m (10 ... 20 ft)

In case installation in the prescribed way is not possible in your listening room most decoding devices allow adjustments of single speakers.

5 Connecting the speakers

Our passive speakers are no difficult load to common amplifiers. A amplifier power of 50 … 500 Watts at 4 Ohms is suggested. Due to the linearised impedance the operation with tube amplifiers is possible without difficulties. Your authorised ME Geithain dealer will gladly provide you with professional advice.

5.1 Single-wiring connection

When connecting the speakers to an integrated amplifier or a power stage check the connection for the right polarity. The gold-plated screwed joints of the terminal are labelled with + and a -. Both mustn't be interchanged. Do not remove the bridges between the high and low frequency terminals.

5.2 Bi-wiring connection

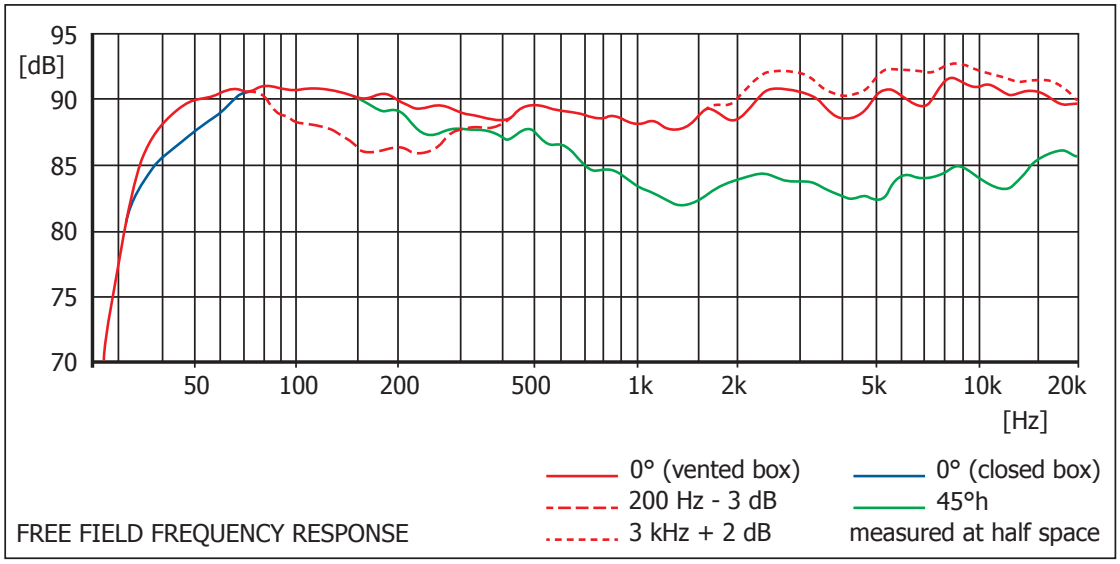
In this case the high and low frequency crossovers are separately connected to your integrated amplifier or power stage. Remove the bridges between the high and low frequency terminals before connecting the speakers to the amplifier. Check the connection for the right polarity. The gold-plated screwed joints are labelled with a + and a – and mustn't be interchanged.

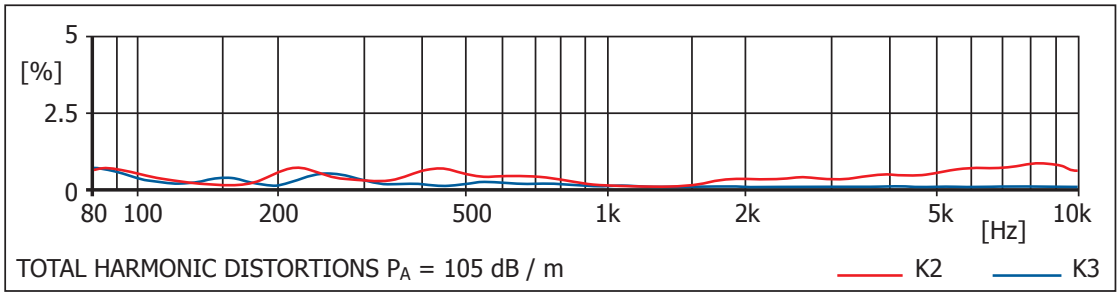
6 Technical data

General	passive high-end-coaxial-loudspeaker for listening distances between 3 m and 6 m
Principle of construction	coaxial 3-way-system in vented and closed box
Maximum SPL	118 dB peak / r = 1 m (3.3 ft)
Sensitivity	90 dB / r = 1 m (3.3 ft)
Bandwidth	35 Hz ... 20 kHz ± 3 dB / 2 pi
Adjustments	200 Hz - 3 dB via gold plated jumper 3 kHz + 2 dB via gold plated jumper
Directivity index from 100 Hz ... 10 kHz	increasing from 2 dB to 13 dB
Total harmonic distortion measured at 96 dB / r = 1 m (3.3 ft) from 100 Hz ... 10 kHz	≤ - 44 dB
Electronic crossover frequencies	300 Hz and 2 kHz
Impedance	4 Ohms (impedance linearised)
Nominal power capacity	200 W
Maximum power capacity	500 W peak
Recommended amplifier power	50 W ... 500 W peak
Loudspeaker systems Woofer Mid-woofer Tweeter	 260 mm (10″) cone 260 mm (10″) cone 3x 25 mm (1″) dome
Input connector	bi-wiring terminal 4 mm gold-plated binding posts / banana jacks
Dimensions (H x W x D)	1.165 x 357 x 419 mm (45.9″ x 14.1″ x 16.5″)
Weight	53 kg (116.8 lbs)
Design of the Cabinet	MDF-wood in ash black veneered optional different veneers or colours

7 Acoustic measurements

All acoustic measurements are carried out under anechoic conditions with 1 m (3.3 ft) distance.





8 Notes

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